This listing of claims will replace all prior versions, and listings, of claims in the application:

Listing of Claims:

1. (currently amended) A Cartesian loop transmitter ~~(100)~~ comprising a forward path ~~(102)~~ and a feedback path ~~(104)~~, each of these paths comprising an I-channel and a Q-channel, as well as an isolator eliminator ~~(106)~~ ~~**characterized in that**~~ and wherein said transmitter ~~(100)~~ comprisinges:
   a) a first low pass filter ~~(138)~~ and a first band pass filter ~~(140)~~ connected to I-channel at LP2;
   b) a second low pass filter ~~(142)~~ and a second band pass filter ~~(144)~~ connected to Q-channel at LP2;
   c) a first root mean square detector ~~(146)~~ collecting signal from said first low pass filter ~~(138)~~ and from said second low pass filter ~~(142)~~;
   d) a second root mean square detector ~~(148)~~ collecting signal from said first band pass filter ~~(140)~~ and from said second band pass filter ~~(144)~~;
   e) a divider ~~(150)~~ connected to said first and said second root mean square detectors ~~(146 and 148)~~;
   f) a comparator ~~(152)~~ connected to said divider ~~(150)~~; and to
   g) a microprocessor ~~(154)~~ connected to ~~an~~ input attenuators ~~(108) and (110)~~ on said I- and Q-channels.

2. (currently amended) The Cartesian loop transmitter (100) of claim 1 wherein a memory ~~(156)~~ is connected to said microprocessor ~~(154)~~.

3. (currently amended) A method of adjusting an output level of a Cartesian loop transmitter ~~(100)~~ in a digital radio system, the method comprising the steps of:
   a) applying a factory predefined attenuation setting ~~(202)~~ for adjusting said output level if attenuation setting for a previous slot is not available ~~(200)~~, or ~~b)~~ applying said

attenuation setting obtained in the previous ~~(204)~~ slot for adjusting said output level in a current slot;

~~c)~~ b) measuring an on-channel baseband signal level ~~(206)~~ at LP2;

~~d)~~ c) measuring a noise level ~~(208)~~ at predefined frequency offset at LP2;

~~e)~~ d) calculating a ratio ~~(214)~~ of said noise level to said on-channel baseband signal level; and

~~f)~~ e) if said ratio is above a threshold ~~(216):~~, increasing an attenuation setting ~~(218)~~ of an input signal;and ~~g)~~ storing ~~(222)~~ said attenuation setting in a memory.

4. (currently amended) The method according to claim 3 wherein steps ~~c) through g)~~b) through e) are repeated in a loop until said ratio is below said threshold.

5. (currently amended) The method according to claim 3 ~~or 4~~ wherein ~~for determining~~calculating said ratio comprises taking a root mean square of said on-channel baseband signal level ~~(210)~~ and a root mean square of said noise level ~~(212) are taken~~.

6. (currently amended) The method according to ~~any one of~~ claim[[s]] 3 ~~to 5~~ wherein after increasing said attenuation setting a delay is applied ~~(220)~~ to execution of software, which based on next samples, calculates said ratio and increases said attenuation setting.

7. (currently amended) The method according to ~~any one of~~ claim[[s]] 3 ~~to 6~~ wherein in said step of storing said baseband signal level and said noise level measured at LP2 are stored in said memory.

8. (currently amended) The Cartesian loop transmitter ~~A radio transmitter according to any one~~ of claim[[s]] 1 ~~to 2 and which~~ wherein the transmitter is operable to provide communications in at least one of TETRA, ~~and/or~~ GSM, and~~/or~~ IDEN communication systems.

9. (cancelled)